

Claims

1. A method for providing call waiting service for a computer connected to an Internet Service Provider (ISP) without dropping the connection with the ISP, the method comprising:
 - 5 initiating an internet call waiting connection between the computer and an ISP, the internet call waiting connection traversing a switch;
 - 10 sending the directory number and a dynamic IP address of the computer to an Internet Call Waiting/Holding (ICW/H) server;
 - 15 storing the directory number and the dynamic IP address of the computer at the ICW/H server; and
 - 20 sending a message from the ICW/H server to the switch indicating that the call waiting service is active.

2. A method for providing call waiting service in accordance with claim 1, the method further comprising the steps of:
5 receiving an incoming call request intended for the computer at the switch while the internet call waiting connection is active;

10 routing the incoming call request from the switch to the ICW/H server; and

15 alerting the computer of the incoming call request without dropping the internet call waiting connection.

20 3. A method for providing call waiting service in accordance with claim 2, wherein the step of alerting the computer of the incoming call request is performed by the ICW/H server via the internet call waiting connection.

25 4. A method for providing call waiting service in accordance with claim 2, wherein step of alerting the computer of the incoming call comprises presenting the computer with a choice as to whether to accept the incoming call request.

30 5. A method for providing call waiting service in accordance with claim 4, further comprising step of maintaining the internet call waiting connection if the computer accepts the incoming call request.

6. A method for providing call waiting service in accordance with claim 5, further comprising the step of switching back to the internet call waiting connection after the incoming call releases.

7. A method for providing call waiting service in accordance with claim 4, the method further comprising the step of dropping the internet call waiting connection.

8. A method for providing call waiting service in accordance with claim 4, the method further comprising the step of rejecting the incoming call request.

5 9. A method for providing call waiting service in accordance with claim 8, wherein the step of rejecting the incoming call request comprises playing a prerecorded message.

10 10. A method for providing call waiting service in accordance with claim 8, wherein the step of rejecting the incoming call request comprises sending a message to the phone associated with the incoming call request.

15 11. A method for providing call waiting service in accordance with claim 10, wherein the message is a packet-based message.

12. A method for providing call waiting service in accordance with claim 10, further comprising the step of converting the message utilizing a text-to-speech converter.

20 13. A method for providing call waiting service in accordance with claim 1, wherein the step of initiating an internet call waiting connection between the computer and an ISP comprises dialing an access code to enable the internet call waiting service.

14. An internet call waiting system comprising:
a switch for receiving a request for an internet call
waiting connection from a computer;
an Internet Service Provider (ISP) coupled to the switch
5 and providing access to the Internet, the ISP effective in
assigning a dynamic Internet Protocol (IP) address to the
computer for the internet call waiting connection to the
internet; and
an Internet Call Waiting/Holding (ICW/H) server coupled
10 to the switch and the ISP, the ICW/H server effective in
receiving and storing the directory number and the dynamic IP
address of the computer, the ICW/H server also effective in
sending a message to the switch indicating that the call
waiting service is active.

00214740
00214740
00214740
00214740
00214740

15. An internet call waiting system in accordance with claim 14, wherein the switch is effective in performing internet call waiting registration.

5 16. An internet call waiting system in accordance with claim 15, wherein the switch is effective in completing the internet call waiting registration based upon receipt of a confirmation from the ICW/H server.

10 17. An internet call waiting system in accordance with claim 14, wherein the switch is effective in receiving an incoming call request intended for the computer while the internet call waiting connection is active.

15 18. An internet call waiting system in accordance with claim 17, wherein the switch is effective in routing the incoming call request to the ICW/H server.

20 19. An internet call waiting system in accordance with claim 18, wherein the switch is effective in releasing the internet call waiting connection and bridging a connection between a computer and an incoming call.

25 20. An internet call waiting system in accordance with claim 18, wherein the switch is effective in maintaining the internet call waiting connection and bridging a connection between a computer and an incoming call.

30 21. An internet call waiting system in accordance with claim 20, wherein the switch is effective in releasing the connection between the computer and the incoming call and reactivating the internet call waiting connection between the computer and the ISP.

22. An internet call waiting system in accordance with claim 21, wherein the switch is effective in deactivating the internet call waiting connection.

5 23. An internet call waiting system in accordance with claim 18, wherein the ICW/H server is effective in receiving a message including the directory number and dynamic IP address of the computer to the ISP.

10 24. An internet call waiting system in accordance with claim 23, wherein the ICW/H server is effective in alerting the computer of the incoming call request without dropping the internet call waiting connection.

15 25. An internet call waiting system in accordance with claim 23, wherein the ICW/H server is effective in deactivating the internet call waiting connection.

10 24
15 25
20 26
25 27
30 28
35 29
40 30
45 31
50 32
55 33
60 34
65 35
70 36
75 37
80 38
85 39
90 40
95 41
100 42
105 43
110 44
115 45
120 46
125 47
130 48
135 49
140 50
145 51
150 52
155 53
160 54
165 55
170 56
175 57
180 58
185 59
190 60
195 61
200 62
205 63
210 64
215 65
220 66
225 67
230 68
235 69
240 70
245 71
250 72
255 73
260 74
265 75
270 76
275 77
280 78
285 79
290 80
295 81
300 82
305 83
310 84
315 85
320 86
325 87
330 88
335 89
340 90
345 91
350 92
355 93
360 94
365 95
370 96
375 97
380 98
385 99
390 100
395 101
400 102
405 103
410 104
415 105
420 106
425 107
430 108
435 109
440 110
445 111
450 112
455 113
460 114
465 115
470 116
475 117
480 118
485 119
490 120
495 121
500 122
505 123
510 124
515 125
520 126
525 127
530 128
535 129
540 130
545 131
550 132
555 133
560 134
565 135
570 136
575 137
580 138
585 139
590 140
595 141
600 142
605 143
610 144
615 145
620 146
625 147
630 148
635 149
640 150
645 151
650 152
655 153
660 154
665 155
670 156
675 157
680 158
685 159
690 160
695 161
700 162
705 163
710 164
715 165
720 166
725 167
730 168
735 169
740 170
745 171
750 172
755 173
760 174
765 175
770 176
775 177
780 178
785 179
790 180
795 181
800 182
805 183
810 184
815 185
820 186
825 187
830 188
835 189
840 190
845 191
850 192
855 193
860 194
865 195
870 196
875 197
880 198
885 199
890 200
895 201
900 202
905 203
910 204
915 205
920 206
925 207
930 208
935 209
940 210
945 211
950 212
955 213
960 214
965 215
970 216
975 217
980 218
985 219
990 220
995 221
1000 222

26. An Internet Call Waiting/Holding (ICW/H) server comprising:

5 a packet port for receiving a directory number and a dynamic IP address of a computer, the directory number and the dynamic IP address associated with a computer for an internet call waiting connection;

10 memory for storing the directory number and the dynamic IP address of the computer;

a processor; and

15 a circuit port for sending a message to a switch indicating that call waiting service is active.

10520-2626262626-00000

27. An Internet Call Waiting/Holding (ICW/H) server in accordance with claim 26, wherein the circuit port is effective in receiving an incoming call request from the switch.

5

28. An Internet Call Waiting/Holding (ICW/H) server in accordance with claim 27, wherein the processor is effective in sending an alerting message including the directory number of an incoming caller to the computer.

10

29. An Internet Call Waiting/Holding (ICW/H) server in accordance with claim 27, wherein the processor is effective in sending a message via the circuit port to the switch for instructing the switch to perform call bridging functionality.

109240-2627